Performance tasks for grade four

Science

General instructions:

- The tasks are to be distributed, administered and assessed in two successive classes (one period).
- The teacher is to distribute the tasks and explain what to do each task.
- Students can use the student's book.

Performance tasks

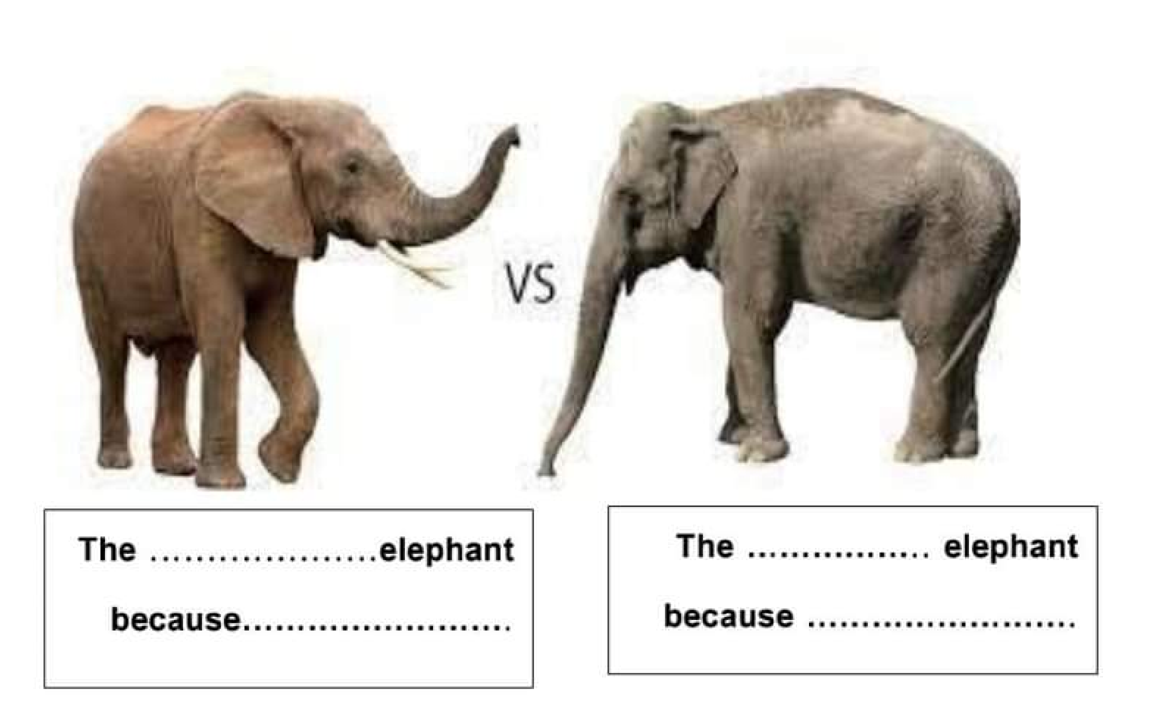
Science

African and Asian elephant

Name:................. .

Class: ....

For most of us, most elephants are similar to each other; so humans can't differentiate between them. This is different for the scientists. There are two main types of elephants: the African elephant and the Asian elephant. If you know that the African elephant can live in hot temperature environments but the Asian elephant can live in mild temperature environments, which one of these is the African elephant and which one is the Asian elephant? Why?



Nowadays wildlife experts agree that the elephants are in danger as a result of the destruction of their natural homes to be used for farming or to construct buildings as well as being hunted by hunters to get their tusks for ivory trade.

Write some suggestions for keeping away the elephants from the effects of human activities. Use these guiding words:

Stating laws to prevent ....

Stopping from ....

Performance tasks

Science

Where does it live?

Name: ....

Class: ....



Observe this picture:

Expect where this animal with big ears lives:

a-in hot desert habitat b- in cold polar environment.

What is your evidence for that?

...



1- If you know that when this animal sees its enemy from other animals, it stands without any movement so it is not seen by the enemy.

This adaptation:

a- structural b- behavioral

2-This animal has long legs which enable it to escape from animals. This adaptation: a- structural b- behavioral

In this picture, you can see a deer which lives in desert and it is one of the animals which adapt to living in the desert habitat. Observe the picture and determine:

1- The kind of adaptation which enables it from running very fast........

a- structural b- behavioral

2-This deer is active at night to get food and avoid enemies. This adaptation is .... a- structural b- behavioral

Performance tasks

Science

Can the polar bear live in hot habitat?



Name: ....

Class: ....

-You studied that the polar bear adapts to living in very cold habitat. Why can't the polar bear live in the hot desert?

……………………………………………

……………………………………………

-What changes should happen to this animal to be able to live in the hot desert ………….



-The fur color: the color changes to ……….

-Think and expect: if the polar bear moves to live in the camel's desert habitat, **will its life continue: yes ( ) no ( )**

Performance tasks

Science

Which one do you prefer?

Name: ……………………………

Class: …………………………………

Cars are different according to the different kinds of energy which they use. There are cars which work with solar energy; others work with electricity and others work with benzene.

-If you were a decision maker in your city and you have to choose one kind of cars to be the only kind to use in your city. What kind will you choose according to these criteria?

Criteria	Solar car	Electrical car	Fuel car
Cheap source of energy			
Clean source of energy			

-Order the cars according to the preference of your city which has a lot of sunshine hours.

1- .... 2- .... 3- ....

-Write your decision and say why.

....

....

....

Performance tasks

Science

A sports competition

Name: ....

Class: ....

You can see a sports competition. What can you observe in energy transfer (potential energy- kinetic energy) when the player crosses the obstacles?



From this figure, determine the type of energy across the stages in which the player crosses the obstacles

Position	Acquired Energy
Position 1	....
Position 2	....
Position 3	....

In which position there is the greatest potential energy?

....

In which position there is the greatest kinetic energy?

....

Performance tasks for grade four

Science

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Performance tasks

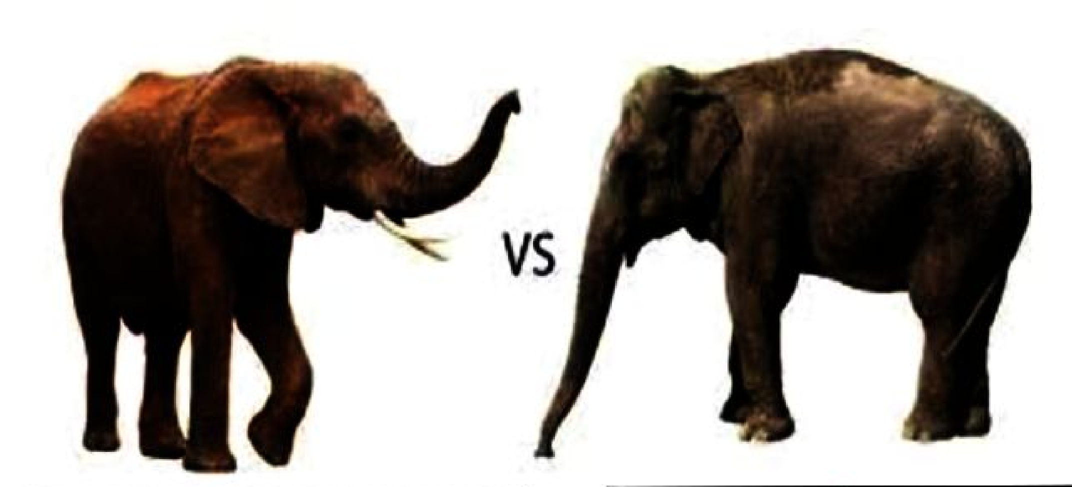
Science

African and Asian elephant

Name:................... .

Class: ....

For most of us, most elephants are similar to each other; so humans can't differentiate between them. This is different for the scientists. There are two main types of elephants: the African elephant and the Asian elephant. If you know that the African elephant can live in hot temperature environments but the Asian elephant can live in mild temperature environments, which one of these is the African elephant and which one is the Asian elephant? Why?



The ..African...elephant because. Taller Heavier than Large ears	The ..Asian.. elephant because Shorter in hight Lighter than Small ears

Nowadays wildlife experts agree that the elephants are in danger as a result of the destruction of their natural homes to be used for farming or to construct buildings as well as being hunted by hunters to get their tusks for ivory trade.

Write some suggestions for keeping away the elephants from the effects of human activities. Use these guiding words:

Starting laws to prevent ...Elephant hunting.................

Stopping from .Destruction of elephant natural home , hunt elephant to use its trucks ....

Stating laws to prevent ....

Stopping from ....



Performance tasks

Science

Where does it live?

Name: ....

Class: ....

Observe this picture:

Expect where this animal with big ears lives:

a-in hot desert habitat b- in cold polar environment.

What is your evidence for that?

Big ears used to decrease its boby tempreature



1- If you know that when this animal sees its enemy from other animals, it stands without any movement so it is not seen by the enemy.

This adaptation:

a- structural b- behavioral

2-This animal has long legs which enable it to escape from animals. This adaptation: a- structural b- behavioral

In this picture, you can see a deer which lives in desert and it is one of the animals which adapt to living in the desert habitat. Observe the picture and determine:

1- The kind of adaptation which enables it from running very fast........

a- structural b- behavioral

2-This deer is active at night to get food and avoid enemies. This adaptation is .... a- structural b- behavioral

Tick fur ....

Small ears ....

-What changes should happen to this animal to be able to live in the hot desert large ears ....



-The fur color: the color changes to Sandy color ....

-Think and expect: if the polar bear moves to live in the camel's desert habitat, **will its life continue: yes ( ) no ( )**

Performance tasks

Science

Which one do you prefer?

Name: ....

Class: ....

Cars are different according to the different kinds of energy which they use. There are cars which work with solar energy; others work with electricity and others work with benzene.



-If you were a decision maker in your city and you have to choose one kind of cars to be the only kind to use in your city. What kind will you choose according to these criteria?

Criteria	Solar car	Electrical car	Fuel car
Cheap source of energy	✓	✗	✗
Clean source of energy	✓	✓	✗

-Order the cars according to the preference of your city which has a lot of sunshine hours.

1- Solar car ……………… 2- Electric car ……………… 3- Fuel car ………………

-Write your decision and say why.

……………………………………………………………………
Solar car use sun (cheap and clean source)
……………………………………………………………………
……………………………………………………………………

Performance tasks

Science

A sports competition

Name: ……………………………………

Class: ……………………………………

You can see a sports competition. What can you observe in energy transfer (potential energy- kinetic energy) when the player crosses the obstacles?





From this figure, determine the type of energy across the stages in which the player crosses the obstacles

Position	Acquired Energy
Position 1	kinatic…………………
Position 2	potintial………………………
Position 3	…………kinatic

In which position there is the greatest potential energy?

……………………2……………………

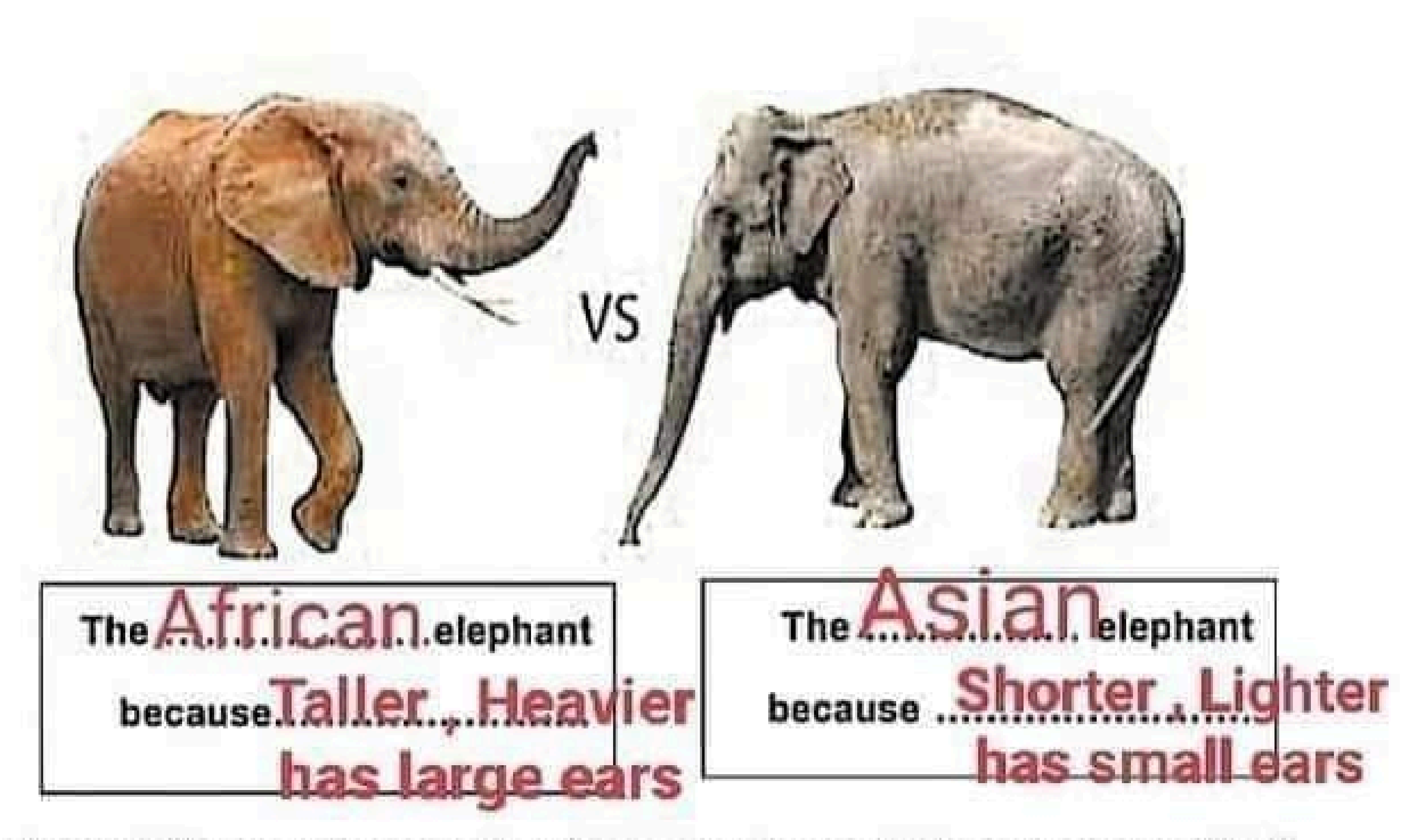
In which position there is the greatest kinetic energy?

……………………3……………………

Name:.................. .

Class: ....

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Nowadays wildlife experts agree that the elephants are in danger as a result of the destruction of their natural homes to be used for farming or to construct buildings as well as being hunted by hunters to get their tusks for ivory trade.

Write some suggestions for keeping away the elephants from the effects of human activities. Use these guiding words:

putting laws to prevent

1- The hunting of elephants.

2- Destroying Thier homeland.

Observe this picture:

Expect where this animal with big ears lives:

a-in hot desert habitat   b- in cold polar environment.

What is your evidence for that?

It has large size ears to cool its body.



1- If you know that when this animal sees its enemy from other animals, it stands without any movement so it is not seen by the enemy.

This adaptation:

a- structural   b- behavioral

2-This animal has long legs which enable it to escape from animals. This adaptation: a- structural   b- behavioral

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Performance tasks

Science

Can the polar bear live in hot habitat?



Name: ....

Class: ....

-You studied that the polar bear adapts to living in very cold habitat. Why can't the polar bear live in the hot desert?

5

It has thick white fur and small ears

....

....

–What changes should happen to this animal to be able to live in the hot

fur become thin - ear become bigger desert ....



–The fur color: the color changes to ....



–Think and expect: if the polar bear moves to live in the camel's desert habitat, **will its life continue:** **yes (   )** **no (   )**

Performance tasks

Science

Which one do you prefer?

Name: ....

Class: ....

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-If you were a decision maker in your city and you have to choose one kind of cars to be the only kind to use in your city. What kind will you choose according to these criteria?

Criteria	Solar car	Electrical car	Fuel car
Cheap source of energy	✓		
Clean source of energy	✓	✓	

-Order the cars according to the preference of your city which has a lot of sunshine hours.

1- solar car 2- electrical car 3- fuel car

-Write your decision and say why.

Because solar energy is cheap and clean source of energy that don't pollute environment.

Performance tasks

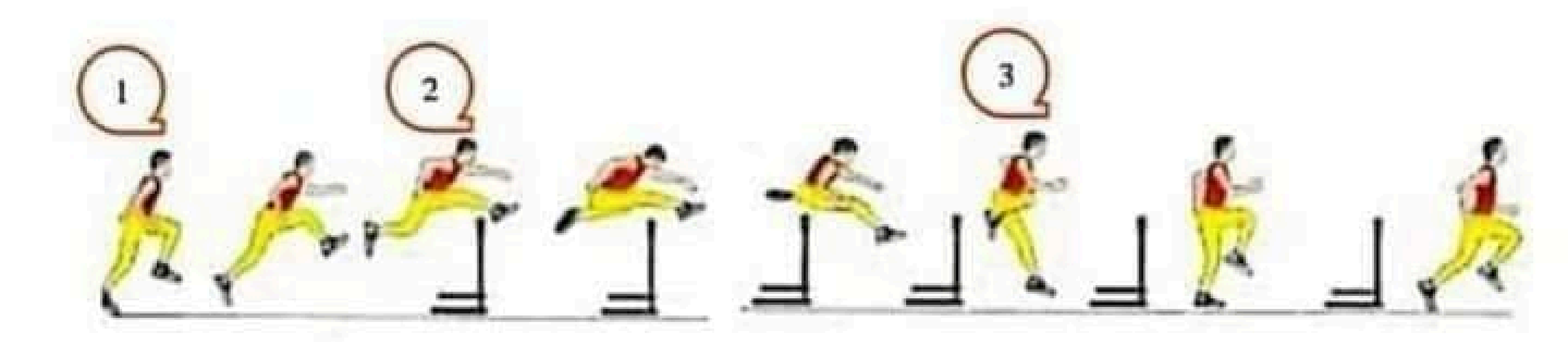
Science

A sports competition

Name: ....

Class: ....

You can see a sports competition. What can you observe in energy transfer (potential energy– kinetic energy) when the player crosses the obstacles?



From this figure, determine the type of energy across the stages in which the player crosses the obstacles

Position	Acquired Energy
Position 1	kinetic energy
Position 2	potential energy
Position 3	kinetic energy

In which position there is the greatest potential energy?

2

In which position there is the greatest kinetic energy?

3

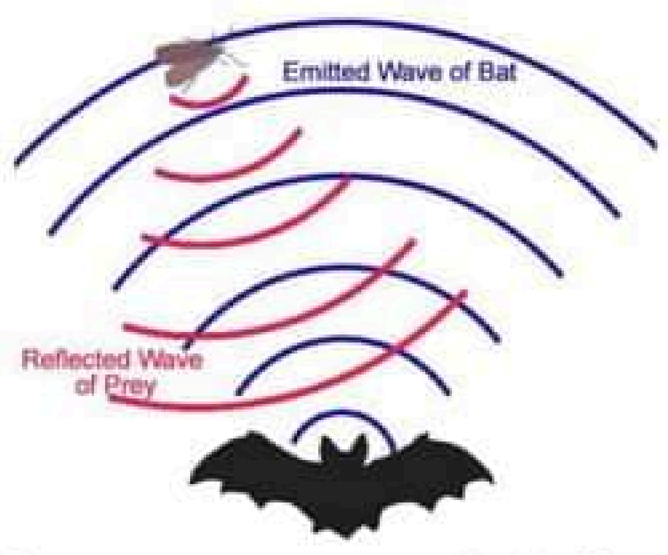
Performance Tasks
Science G4

Task 1
Analyze and conclude the ways in which bats can use sound

1- Bats use echolocation property to detect where the objects around them are so they can avoid being hit
2- Bats also use echolocation to hunt their preys such as mosquitoes
3- Bats use sound to communicate with each other as they make different sounds that mean different things
4- The most sound the bats produce are arguments about food and where to get sleep

Task 2

Draw a diagram that explains how bats adapt using sound to avoid obstacles and to hunt their preys



1-Bats produce a high-pitched sound

2-The sound hits something nearby the bat and reflects back to it in the form of echo

3- Bats listen to the echo (reflected sound)

4-Bat knows that there is something nearby

Task 3

Explain the importance of using the bats different sounds that have different meanings

Write your hypothesis and evidence

Hypothesis

Bats use sounds to navigate, hunt and communicate

Evidence

1-Bats live in dark places such as caves, where there is not enough light for them to see but they can hunt their preys and avoid being hunted

2-Bats use high pitched sound that hits their preys and bounces back to them so they can locate their preys

3-Bats use sound to communicate with each other as they make different sounds that means different things

4-Bats produce arguments about food and where to get sleep

Task 4

What are the most common safety features in cars?

Seatbelts

The seatbelts are used to hold the driver or the passengers in their places so that they don't hit the the steering wheel, dashboard, front windshield of the car or any hard objects inside the car

Airbags

Airbags are folded up inside the frame of the car and they work in the case of collisions or during sudden stop of the car

Task 5

Write an article about one of the features that the carmakers use to protect the drivers or the passengers. Describe how your device works during collisions or dangers and which passengers would benefit from the device

-Brake assist or emergency brake assist is a car braking technology that increases braking pressure in an emergency.
-Brake assist applies maximum force to the brakes to help make sure the car stops as quickly as possible.

-Brake assist benefits the driver and helps him to stop the car quickly